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	GEOLOGY	GENERALIZED FROM HOARE AND COONRAD (1978	
		CORRELATION OF MAP UNITS	
		SURFICIAL DEPOSITS	
	Qu) QUATERNARY		
	VOLCANIC, SEDIMENTARY, INTRUSIVE ROCKS AND METAMORPHIC ROCKS		
	Qtb	Pleistocene) QUATERNARY	
	QTs	Plio-Pleistocene QUATERNARY or TERTIARY Tif Tim Tn - TERTIARY	
	Tv	Early Tertiary TERTIARY	
	Ks	Late Cretaceous Maestrichian ? Macanada and Cretaceous	
	Kb Kig Kts Kcg	Upper and Lower Cretaceous CRETACEOUS Lower Cretaceous	
	KJvs	Lower Cretaceous to CRETACEOUS AND JURASSIC	
	Jk Jvs	\ Middle to Lower	
	Jivs	Depre Jurassic Jurassic Jurassic AND Jurassic 2	
	Rvs Mz Pz	Lower Cretaceous MESOZOIC	
	Pv	Lower Ordovician ? PALEOZOIC	
	Pzcs) PALEOZOIC Pzmg) PALEOZOIC ?	
	p€D p€k	PRE-CAMBRIAN	
		DESCRIPTION OF MAP UNITS	
		FICIAL DEPOSITS CONSOLIDATED SEDIMENTARY DEPOSITS	
		IMENTARY, VOLCANIC, AND METAMORPHIC ROCKS	
		GIAK BASALT MICONSOLIDATED MARINE BEACH SEDIMENTS	
	Tv VO	LCANIC ROCKS AND VOLCANOGENIC SEDIMENTS - Chiefly andesitic flows and tuffs MMIT ISLAND FORMATION - Nonmarine conglomerate, sandstone, shale, and carbonaceous mudstone	
	K K KU	SKOKWIM GROUP - Conglomerate overlain by interbedded graywacke, siltstone, and shale; commonly micaceoumostly marine	
		CHIA RIDGE GRAYMACKE - Chiefly interbedded calcareous graywacke, siltstone, and conglomerate with local coquinas of Buchia shells MY GRIT AND LIMESTONE - Chiefly angular grit cemented by bioclastic limestone	
		FFS AND SEDIMENTARY ROCKS - Varied assemblage of andesitic tuffs, graywacke, siltstone, impure limestor and tuffaceous chert; tuff and tuffaceous sediments commonly laumontitized	
	KJvs VO	AYMACKE AND CONGLOMERATE - Marine graywacke, siltstone, and conglomerate; commonly calcareous LCANIC AND SEDIMENTARY ROCKS - Interbedded intermediate to mafic flows, tuffs, tuffaceous sedimentary rocks, and argillite; intermediate composition tuffaceous rocks commonly laumontitized	
	Jvs VO	LUKAK GRAYWACKE - Chiefly very hard lithic graywacke and siltstone with local conglomerate LCANIC AND SEDIMENTARY ROCKS - Andesitic, trachytic, and basaltic flows and breccias interbedded with	
	JIVS VO	volcanogenic sedimentary rocks LCANIC AND SEDIMENTARY ROCKS - Mafic flows and breccias interbedded with volcanogenic sedimentary rocks fractures commonly coated with laumontite	
		SOZOIC AND PALEOZOIC ROCKS UNDIVIDED - Widespread marine unit including mafic to intermediate volcanic rocks, tuffaceous sedimentary rocks, chert, argillite, siltstone, graywacke, conglomerate, and limestor LCANIC AND SEDIMENTARY ROCKS (Upper Triassic) - Locally differentiated marine unit of chert, tuffaceous	
	Pv V0	cherty rocks, argillite, siltstone, wackes, conglomerate, limestone, and mafic flows and breccia LCANIC ROCKS (Permian) - Locally differentiated marine unit of pillow basalts, massive mafic flows, breccia, and tuff	
	PI LI	MESTONE (Permian) - Locally differentiated thin unit of marine limestone; generally tuffaceous, common has strong fetid odor	
		MESTONE - Thin-bedded to massive limestone with minor interbedded tuff and mafic flows; locally recrys- tallized to marble with interbedded quartzite and quartz-chlorite schist LCAREOUS SCHIST (Permian or older?)	
		NEKTOK METAMORPHIC COMPLEX - Gneiss, schist, amphibolite, and marble; upper greenschist to lower amphilolite facies	
		RBLEIZED LIMESTONE - Locally differentiated RUSIVE ROCKS	
	Tif FE	ELSIC INTRUSIVE ROCKS - Chiefly rhyolitic to dacitic dikes and sills; locally mapped FIC INTRUSIVE ROCKS - Diabase, basalt, dioritic, and gabbroic dikes and sills locally mapped	
		ROGARUM COMPLEX - Quartz-rich porphyritic fe ³ site intrusive-extrusive complex of dikes, sills, tuff, as breccias	
	J ₀ GA	ANITIC ROCKS - Chiefly quartz monzonite, granodiorite, and quartz diorite stocks ABBROIC ROCKS - Commonly shows compositional layering and generally associated with ultramafic rocks TRAMAFIC ROCKS - Serpentinite, dunite, and websterite	
s.	Jt TR	ONDHJEMITE - Associated with serpentinite and gabbro TAGABBRO AND GREENSTONE - Probable dismembered ophiclite complex of mafic flows, dikes, volcanoclastic	
		rocks, and gabbro altered by greenschist facies metamorphism and calcium metasomatism	
		GEOLOGIC SYMBOLS ontact. Known, approximately located, gradational, and inferred. Most contacts between bedded rock un are probably faults	
1 S.	Fa	nult or fault zone. Dashed where approximately located, inferred, or concealed brust fault. Dashed where approximately located, inferred, or concealed. Sawteeth on upper plate	
		ornfels	
		GEOCHEMICAL SYMBOLS	
	\sim	DED MOUNTAIN IN TRANSCES BODY	
2 S.	RM,	RED MOUNTAIN ULTRAMAFIC BODY RED MOUNTAIN CONTACT ZONE	
	22	GEOCHEMICAL SAMPLE SITES	
i	y y	ROCK (CLARK, GRYBECK, GREENWOOD, AND OTHERS, 1978; COONRAD, AND OTHERS, 1978)	
135.	*	CONCENTRATE (OVERSTREET, AND OTHERS, 1973)	
	♦	OFFSHORE AND ONSHORE SEDIMENTS (BARNES, AND OTHERS, 1978)	
900/1	0	BEACH AND STREAM SEDIMENTS (BERRYHILL, 1963)	
	•	STREAM DRAINAGE SEDIMENT (HESSIN, AND OTHERS, 1978) STREAM DRAINAGE SEDIMENT (CLARK, GRYBECK, HESSIN,	
. 145.	•	AND OTHERS, 1978)	
		ABUNDANCE	
	Y 1000	NUMBER WITH SOLID ROCK SAMPLE-SITE SYMBOL	
T.15 S.		REPRESENTS GEOCHEMICAL CONCENTRATION IN PARTS PER MILLION (PPM)	
1	•	SOLID STREAM-DRAINAGE SAMPLE-SITE SYMBOL INDICATES GEOCHEMICAL ABUNDANCE OF 90TH PERCENTILE VALUE OR GREATER IN TWO OR MORE	
		GEOCHEMICAL DETERMINATIONS AS SHOWN IN HISTOGRAMS (SHEET 1)	
T.16 S.	000	ABUNDANCE SYMBOLS REPRESENTING 95TH PERCENTILE OR GREATER CONCENTRATIONS DETERMINED IN	
	$\stackrel{\triangle}{\diamondsuit}$	STREAM-DRAINAGE SITE SAMPLES ARE SHOWN WITH HISTOGRAMS (SHEET 1)	
45′			
1	THE TWO SUFER	DISCUSSION OF GEOCHEMISTRY S COMPRISING THIS REPORT SHOW THE DISTRIBUTION AND	
T.17 S.	SAMPLE MEDIA	S COMPRISING THIS REPORT SHOW THE DISTRIBUTION AND CHROMIUM AS GEOCHEMICALLY DETERMINED IN VARIOUS COLLECTED FROM LOCATIONS THROUGHOUT THE GOODNEWS AND	
	REGION AND SH	SLAND QUADRANGLES REGION. SHEET 1 COVERS THE ENTIRE EET 2 COVERS THE AREA OF ABUNDANT SAMPLE DATA IN THE	
	VICINITY OF PI ARE SIMILAR OF FROM ANALYSES	LATINUM. SAMPLE LOCATION AND CONCENTRATION SYMBOLS N BOTH SHEETS. DATA PRESENTED HAVE BEEN COMPILED AND LOCATIONS REPORTED BY BARNES AND OTHERS (1978):	
	CLARK, GRYBEC	63): CLARK, GRYBECK, GREENWOOD, AND OTHERS (1978); K, HESSIN, AND OTHERS (1978): COONRAD AND OTHERS	
T.18S.	(1978); HESSII (1973).	N AND OTHERS (1978); AND OVERSTREET AND OTHERS	
	THE HISTOGRAMS	S ON SHEET T HAVE BEEN USED TO IDENTIFY CONCENTRATIONS	

OF CHROMIUM THAT MIGHT BE ANOMALOUS. ALTHOUGH THE HISTOGRAMS ARE BASED SOLELY ON THE ANALYSES REPORTED BY HESSIN AND OTHERS (1978), THE RESPECTIVE SAMPLE POPULATIONS (BETWEEN 800 AND 900 SAMPLES) APPEAR TO PROVIDE REPRESENTATIVE CONCENTRATION STATISTICS. MANY OF THE HIGHER VALUES OF CONCENTRATION OF CHROMIUM SHOWN ON THE MAPS ARE FROM SAMPLE SITES WHERE ULTRAMAFIC ROCK IS KNOWN TO CROP OUT WITHIN THE IMMEDIATE SOURCE AREA AND SUCH VALUES ARE NOT NECESSARILY ANOMALOUS (SEE HISTOGRAM OF ROCK ANALYSES DATA FROM RED MOUNTAIN ULTRAMAFIC BODY ON SHEET 2). ANALYSES OF OLIVINE CHROMITITES AND THE OCCURRENCE OF PLATINUM IN THE RED MOUNTAIN ULTRAMAFIC COMPLEX ARE DISCUSSED BY BIRD AND CLARK (1976). THE GENERALIZED GEOLOGIC MAP DATA INCLUDED IN SHEET 1, THE MORE DETAILED GEOLOGIC MAP OF THE REGION (HOARE AND COONRAD, 1978), AND MERTIE'S REPORTS (1940, 1969, 1976) SHOULD BE UTILIZED IN CONSIDERING POSSIBLE SOURCE ROCKS FOR THE CHROMIUM THAT HAS BEEN DETECTED IN VARIOUS GEOCHEMICAL SAMPLES.

BACKGROUND INFORMATION RELATING TO THIS REPORT IS PUBLISHED AS
U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 78—9
(AVAILABLE FROM THE SAME SOURCE AS THE MAP)

This report is preliminary and has
not been edited or reviewed for
conformity with Geological Survey
standards and nomenclature.

DATUM IS MEAN SEA LEVEL